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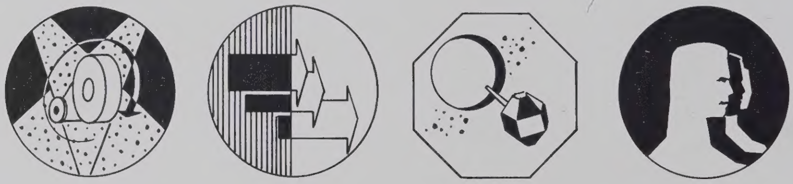
THE WHEELABRATOR CORPORATION ANNUAL REPORT 1966



NEW IN '66

Throughout the year, The Wheelabrator Corporation experienced an unusual series of things *new*—product innovations and improvements, precedent setting processes, original applications, new people for the work force—all elements promising earnest contributions to the continued sound growth of the corporation.

Highlights of "New in '66" are presented pictorially on Pages 9-21.

COVER—Symbolic of the corporation's new facilities activitated in 1966 is Wheelabrator's Research and Development Center, in a night-time scene.

THE WHEELABRATOR CORPORATION

ANNUAL REPORT 1966

DIRECTORS

William H. Coleman, Chairman of the Board
James F. Connaughton, President and Chief Executive Officer
Oliver C. Carmichael, Jr., Chairman of the Board,
Associates Investment Company, South Bend, Ind.
John M. Galvin, Chairman of the Executive Committee,
The Marine Midland Trust Company of Western New York, Buffalo, N.Y.
Walter M. Jeffords, Jr., Consultant,
The Brooklyn Union Gas Company, Brooklyn, N.Y.
Charles H. Klein, President,
Novelart Manufacturing Company, Cincinnati, O.
John J. Lee, Senior Vice President
Max Muller, President, Basic Incorporated, Cleveland, O.
Albert E. Rising, Jr., Consulting Metallurgist, Vice Chairman of the Board,
The Equity Corporation, New York, N.Y.
J. Davidge Warfield, President, Aurora Corporation of Illinois, Cleveland, O.

OFFICERS

William H. Coleman, Chairman of the Board
James F. Connaughton, President and Chief Executive Officer
John J. Lee, Senior Vice President
Jacob A. Schmidt, Jr., Vice President—Finance and Treasurer
William Butler, 3rd, Vice President—Commercial Relations
Edward W. Chapin, Secretary
Stanley R. Twitchell, Controller

CORPORATE DATA

OFFICES

400 South Byrkit Avenue, Mishawaka, Ind. 46544

STOCK LISTING

American Stock Exchange

TRANSFER AGENT

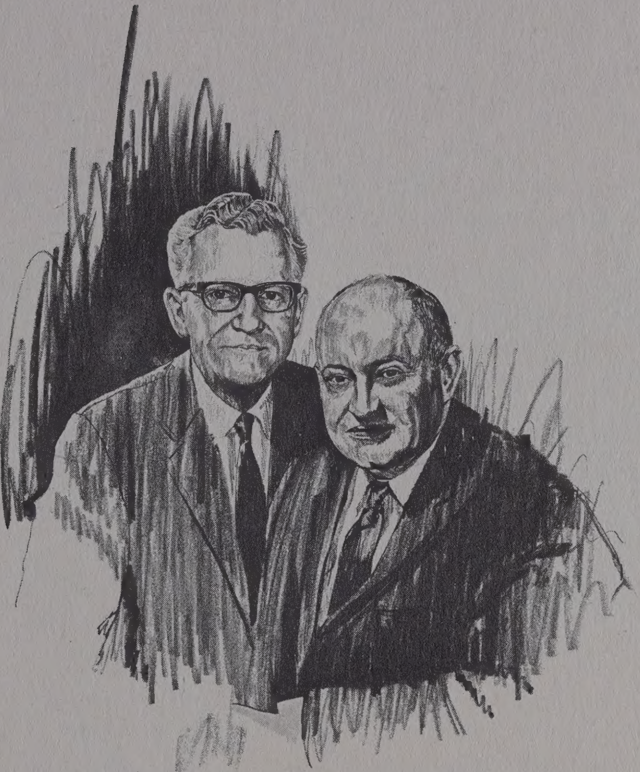
The Chase Manhattan Bank, New York, N. Y. 10015

REGISTRAR

Marine Midland Grace Trust Company of New York,
New York, N. Y. 10015

THE FINANCIAL YEAR IN REVIEW

	1966	1965
Sales Increased 16%	$70,001,474	$60,241,085
Gross Profit Increased 13%	$18,443,922	$16,330,579
% to Sales	26.3%	27.1%
Income After Taxes Increased 10%	$ 3,735,200	$ 3,386,905
% to Sales	5.3%	5.6%
% to Stockholders' Equity	11.4%	11.1%
Working Capital at Year End	$24,579,450	$21,070,156
Stockholders' Equity at Year End	$32,728,687	$30,508,704
Common Stockholders' Equity	$18,972,057	$16,420,274
Shares Outstanding at Year End	1,270,895	1,241,630
Book Value Per Share	$ 14.93	$ 13.22
December 31, Market Value	$ 16.75	$ 22.75
Dividends Paid Per Share		
1st Preferred	$ 1.50	$ 1.50
2nd Preferred	.25	.25
Common	.70	.70
Earnings Per Common Share (Based on 1,270,895 shares currently outstanding)		
Before Preferred Dividend Requirement	$ 2.94	$ 2.67
After Preferred Dividend Requirement	$ 2.40	$ 2.10
Stockholders	3125	2929
Employes	3416	2933



Mr. Coleman and Mr. Connaughton

TO THE SHAREHOLDERS:

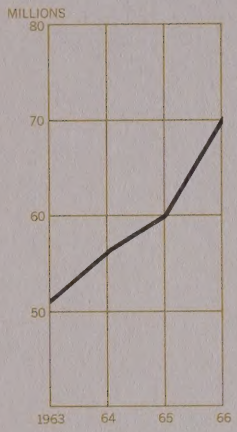
The year 1966 was unquestionably the most active and the most productive in virtually every element of the operations of The Wheelabrator Corporation.

Sales and earnings were at record levels; the capacity to produce was substantially augmented from the standpoints of employe skills and physical expansion; products continued in growing demand by old and new customers and the domestic and international business base was extended with acquisitions and joint ventures.

A remarkable flow of new products, new ideas and new techniques came from the research and engineering departments, and the year ended at December 31 with a sound backlog of future business.

If a single development were to be highlighted, then the focus would be on the wider diversification of product lines. Installations were made in all three of the company's proven types of industrial air pollution control principles, and the early addition of a fourth principle is contemplated. The introduction of the NAD process was an important adjunct to the basic abrasive cleaning line. This not only provides the steel industry with a superior descaling device, but also can contribute to the solution of the water pollution problem.

The association with the aerospace industry brought new component contracts for two airplanes and the shot peening technique was more widely employed to increase the fatigue life of aircraft parts. The corporation made its first entry into the cleaning and testing of metals by ultrasonics and it is anticipated this will add a dimension to cleaning for industry such as the Lorco precision vibratory equipment has over the past six years.



NET SALES

As industry continued to seek an equitable balance between costs and productivity, the corporation strengthened its concept of total service and technical assistance to customers. This represents more than the mere sale of machines. It involves complete professional analysis of present industrial methods and demonstrations of how Wheelabrator equipment can be integrated into a total production process, for example—(1) to handle a complete metals cleaning requirement; (2) to combine processes such as the simultaneous cleaning of castings and core knockout; (3) to provide the constant steel tonnage line offered by the NAD process; (4) to collect, filter, reclaim or dispose of particulate matter through air pollution control systems—and, to decrease total costs.

CAPITAL EXPANSION

The physical expansion, started in 1965 to meet the requirements of the markets into the '70's, continued and will continue in an orderly manner.

By the end of the year, the Wheelabrator Division was occupying 44 per cent more floor space than at the outset of 1965. This not only facilitated the current production schedules, but is a sound asset for the future.

Plans to increase the output of the abrasive making plant in Mishawaka, the world's largest steel shot center, are scheduled for 1967 and 1968. Current abrasive production is at a peak level now and the demand for quality steel shot and grit is expected to grow, especially as the NAD process gains wider usage.

The Barrday Ltd. Division occupied its new facility in Galt, Ontario in 1966; the W. W. Criswell Company Division began production of fabric filter media for West Coast markets at a new site in Riverside, California, and Abrasive Finishing Company, acquired during the year, is in the process of moving to a larger and more modern facility to expedite metal cleaning and shot peening for the aerospace industry.

Capital expenditures at Twin Industries Corporation Division relate directly to facilities and equipment modernization to meet advances in modern aircraft production.

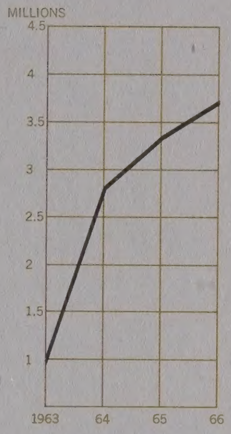
FINANCIAL

Sales during the year were $70,001,474, a 16 per cent increase over sales of $60,241,085 during 1965. Income after taxes amounted to $3,735,200, a rise of 10 per cent over the previous period's income of $3,386,905.

After payment of $685,673 in dividends on preferred shares, income available to holders of the common stock was $3,049,527, equivalent to $2.40 per share. This represented an increase of 14 per cent over 1965, when income available to the common was $2,670,609, or $2.10 per share. The per share results are based on the larger number of common shares outstanding at the end of 1966.

Quarterly dividends of 15 cents each and a special dividend of 10 cents were paid on the common stock, a total of 70 cents, and quarterly dividends were paid on each of the two classes of preferred stock.

The backlog of orders at year's end was approximately the same as the previous year, but a contract received by Twin Industries at the outset of 1967 raised the backlog 20 per cent as of this date to $58,000,000, a new high in bookings.



NET INCOME AFTER TAXES

EXTERNAL GROWTH

The program of external expansion, which was undertaken initially in 1960, carried on during the year. Two companies in the United States, with functions compatible to corporate objectives, were acquired, Canadian manufacturing operations were strengthened with the purchase of a metal working organization in Toronto and additional international interests were obtained.

One of the domestic subsidiaries, Delta Sonics, Inc., of Hawthorne, California, brought a new medium to Wheelabrator's overall leadership in the cleaning of metals. Delta Sonics is a specialist in ultrasonics, a science which deals with sound waves above the audio-frequency range.

The California company designs and produces equipment to clean and test metals by ultrasonics and a subsidiary, Inspection Systems Incorporated, develops equipment for the inspection of metals by ultrasonic immersion. Both types of equipment are used largely by the aerospace and electronics industries. Delta Sonics also makes an ultrasonic welding device for rigid plastic parts employed by the electronics, household wares and toy industries.

Wheelabrator has long produced shot peening machines to increase the fatigue life of automotive parts subject to stress. In recent years, the use of this system by aerospace industries has more than tripled. To further the penetration of this market and provide contracted shot peening services, Abrasive Finishing Company of Gardena, California, was purchased during the year.

Abrasive Finishing is one of two Southern California companies certified as meeting shot peening specifications of the Department of Defense. It also does cleaning and finishing of parts for commercial customers.

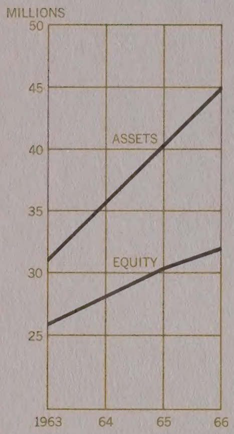
Investments were made in four companies overseas, the largest of which will result by 1969 in the acquisition of a 40 per cent interest in Tilghman Wheelabrator Limited, of Broadheath, Altrincham, England. Tilghman has been licensed since 1935 to make and sell Wheelabrator products in much of the British Commonwealth and the transaction also includes a subsidiary, Tilghman Wheelabrator Kent (Pty.) Ltd. in South Africa.

A joint venture with another old associate, George Fischer Limited of Switzerland, brought the purchase of Ullrich and Roser, G.m.b.H., of Stuttgart-Bad Cannstatt, Germany, a manufacturer of heavy machinery with the capability to build Wheelabrator equipment.

Wheelabrator Argentina, SAIC, was formed with the company's former sales representatives in Buenos Aires, and two other ventures extended company equipment and services to new areas in the Far East—Wheelabrator Metal Cleaning Company of the Philippines, Inc., in Quezon City, Philippines, and Wheelabrator YIT Thailand Limited, in Bangkok.

WHEELABRATOR DIVISION

In the five years, 1960-65, the Wheelabrator Division doubled its sales volume. An ensuing five-year forecast envisioned a potentially comparable growth through 1970. If 1966 can be a criterion, the new five-year goal appears attainable, providing the economy suffers no serious setback.



TOTAL ASSETS and EQUITY

The Division recorded a 17 per cent sales increase, reflecting an upswing in all basic product lines. At this date, the deletion of the seven per cent investment credit to industry is appearing to have little impact on blast cleaning procurement or in the air pollution field, where the credit can still be applied.

The Wheelabrator Corporation of Canada Limited achieved a sales increase of 38 per cent in basic Wheelabrator products and the W. W. Criswell Co. Division in Riverton, New Jersey, produced 21 per cent more fabric filters for air pollution control systems.

One of the innovations in blast cleaning was the introduction of Wheelabrator's patented NAD (no-acid descaling) process, which cleans steel without the use of acid pickling for the first time in the history of steel making. This is considered a major breakthrough in the art of making, shaping and finishing steel.

When the successful operation of the NAD process at Dosco Steel Limited of Montreal was announced, late in the year, it created considerable interest among steel companies in the United States. Many domestic steel companies sent coils of steel to Quebec to be cleaned by Dosco and the results have added to the interest.

A majority of the air pollution control systems delivered were of medium scale but included in installations were the largest Wheelabrator system for the steel industry in terms of cubic feet of air cleaned; the first applications for a lime kiln and a cement clinker cooler; and the biggest Wheelabrator-Lurgi electrostatic precipitator to date, also for a cement plant.

A number of projects are currently programmed in Research and Development. Three new methods of cloth filtration for air pollution are being evaluated; an entirely new approach to vibratory cleaning has been operating on a test stand 24 hours a day; advances in shot peening techniques are being pursued; a new ram roll abrasive cleaner is in development and studies are being conducted in several fields new to Wheelabrator.

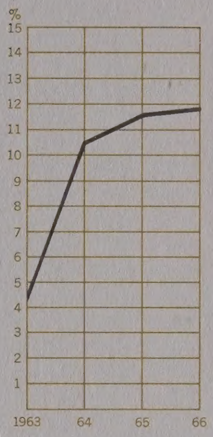
Organizationally, the sales engineering specialists in air pollution control were increased to staff nine regional headquarters for closer liaison with industry's problems; the complexion of the production control department was altered for more efficiency, and the parts and service function was realigned to develop specialists to supervise the needs of specific categories of industries. The Wheelabrator group's employment was 22 per cent above 1965.

TWIN INDUSTRIES CORPORATION DIVISION

During the year, the Twin Industries Corporation Division received a total of sixteen contracts, 14 of which were so-called "follow-on" work and two were new programs.

Of particular consequence, however, was a contract awarded early in 1967 to produce bonded window panels and fuselage frame assemblies for the new 747 transport of The Boeing Company. This continues the association with Boeing's jet transports, which Twin has experienced since the outset of that program, and also relates the Division to the giant new transport of the future.

The contract for the 747 was received from the Norair Division of Northrop Corporation. Tooling has already been started and first production deliveries are scheduled late this year. Total value of the contract is estimated to be in excess of $12 million and gives Twin the highest backlog of orders since 1953.



RETURN
ON INVESTMENT

In total, Twin supplied major assemblies and components for 11 different aircraft—seven military and four commercial. Five of its customers are major aircraft prime contractors, two are missile and space contractors, one is an aircraft subcontractor and one is a U. S. Government agency. Employment in the Buffalo Division increased eight per cent.

One of the new contracts Twin worked on in 1966 was also awarded by Northrop for its F-5 Freedom Fighter, which is currently in service with or programmed for delivery to 14 countries and has completed an extensive combat evaluation in Viet Nam. The contract entails access doors for gun, communications and navigation equipment for this Mach 1.4 fighter.

Other aircraft involved in Twin's operations include the Boeing 707/720, the 727 and B-52 bomber; Grumman's E-2A Hawkeye, the S-2E Tracker and executive planes—the Gulfstream I and II; the Lockheed-Georgia C-141 StarLifter, the Ling-Temco-Vought F-8E Crusader and the Douglas DC-9.

BALCRANK DIVISION

Operations of the Balcrank Division were integrated into the manufacturing processes of Wheelabrator's facilities in Mishawaka during the year and despite the normal problems associated with the physical transfer from Cincinnati, the Division reached an all-time high in bookings and shipments, with the former up 17 per cent and shipments up 19 per cent over 1965.

The general rise was paced by a 48 per cent increase in deliveries of machine tool accessories, and the Brookins line of accessories for service stations was also on the upswing.

Considerable attention was given to the marketing of the Jet Pulser Pump, a patent-applied-for device which feeds oils to drilling machines under a high pressure, pulsating flow. This system permits faster, deeper drilling, keeps the drills cooler, removes chips, provides smoother holes, and is considered a significant adjunct to deep-hole drilling.

Balcrank increased the number of its mobile showrooms to five during the year. These trucks move to various areas of the country, contain a full line of lubricating equipment, allow demonstrations of products in operation, and are effective point-to-point sales tools.

INTERNATIONAL

In two years, investments in countries outside the U. S. and Canada have grown from four to 10 companies and overall, Wheelabrator has 29 direct manufacturing interests or associates in 21 foreign countries.

Sales in 1966 of the companies where equity interests exist were more than $14,000,000. While all of this volume does not accrue to Wheelabrator, nor are these sales included in the corporate financial statement, it may serve as a measure of the scope of the operations of foreign associates.

Income from foreign activities at this point is principally from royalties and dividends. Foreign associates have largely generated sufficient internal funds to complete their own expansion programs without additional assistance from Wheelabrator.

In addition to 1966 transactions already listed, two major license agreements were negotiated and renewed, one with Tilghman Wheelabrator Limited, covering the United Kingdom until 1986, and another with George Fischer Limited, for the European territory until 1976.

Metal cleaning services, employing Wheelabrator equipment, were established in India and Mexico where the company had other operations, and in Thailand and the Philippines. More of these facilities are programmed for 1967 in other parts of the world. Ullrich and Roser is completing a new facility exclusively for the production of Wheelabrator equipment in Germany.

SUMMARY

As has been stated, the new year was begun with a backlog of business sufficient to provide impetus to move forward competitively and with sound profit margins. The elements upon which our business forecasts are traditionally predicated—standard airless blast equipment, abrasives, service parts and commercial air transport orders—indicate no foreseeable major slackening in the requirements for the corporation's diversified products.

In environmental control, the company can make and is making significant contributions in assisting industry in collecting air contaminants and in the lessening of one major industry's water pollution problem.

Industry generally is being hampered by a lack of uniform air pollution standards and government regulations, but if there is a recognizable trend in equipment sales, it is centered on new plant construction, where control systems are being installed wherever there is a source or threat of air pollution. Requests for information and for definitive proposals for air pollution control equipment are increasing.

Efficiencies offered by the company's airless blast cleaning systems and precision vibratory finishing equipment are widely recognized. The ability of the Twin Industries and Balcrank Divisions to serve customers remains constant. Ultrasonics opens a currently modest but potentially interesting avenue to a new field. Support for all of these endeavors is being generated by research and development programs.

The encouraging experiences of the past year represent a total effort by the management and employes of all divisions and operations, strengthened by the assistance and confidence of our shareholders. This is both an expression of appreciation for this support and solicitation for its continuance.

FOR THE BOARD OF DIRECTORS

W. H. Coleman
William H. Coleman
Chairman

James F. Connaughton
James F. Connaughton
President

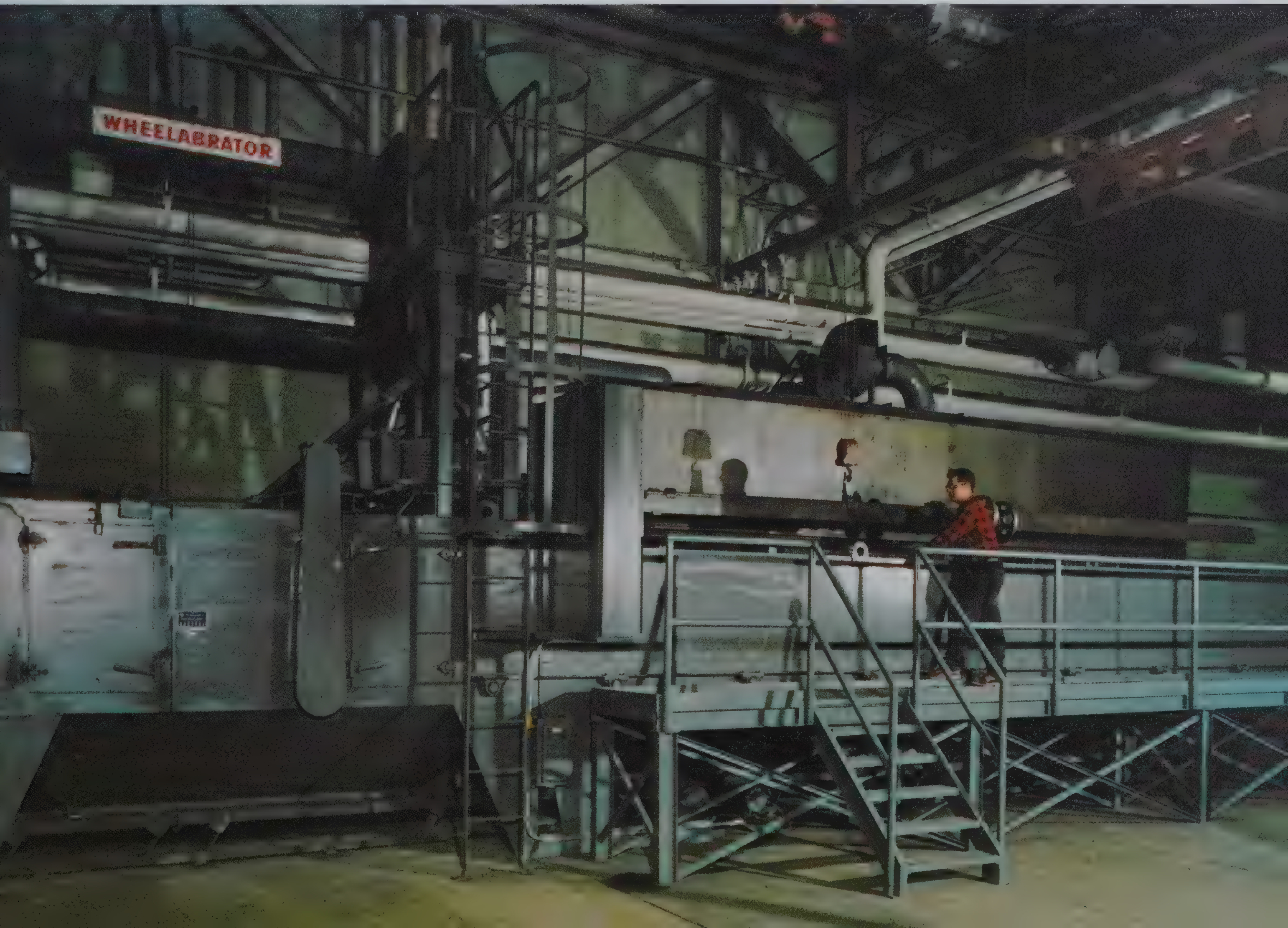
February 20, 1967

PRODUCTS

New in '66

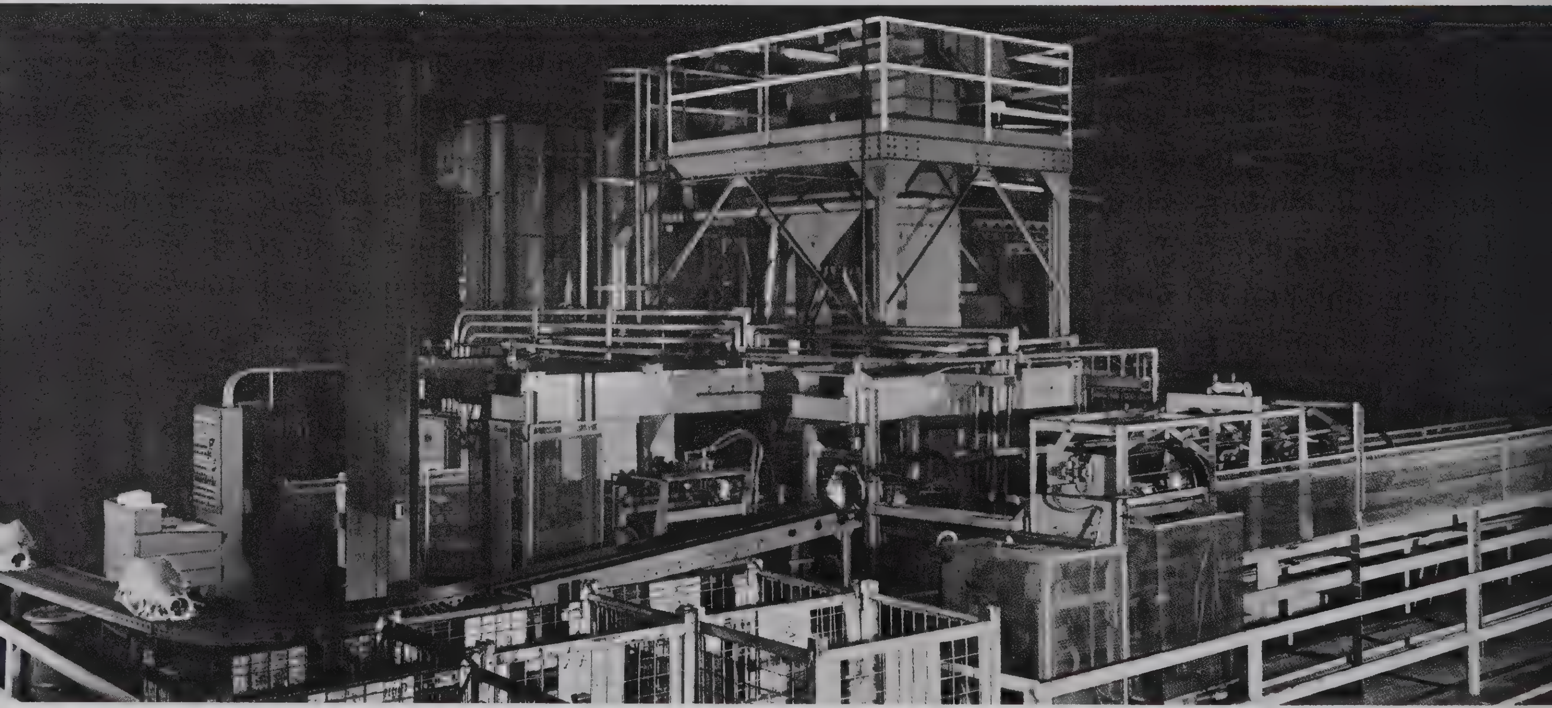
In the almost unbelievable spectrum of technological advance, there is still a single factor whose overtones are substantial—the element of economics. From the board of directors to the plant manager, this translates itself into savings—savings in time, labor and material. Throughout its history, Wheelabrator has tried to exceed the norms in providing equipment which will offer a more total performance in production processes, at higher efficiencies and lower costs. To this end, new products, new techniques, and product improvements have become an integral part of Wheelabrator's program of vital values for customers. The company's foreign associates also operate on this principle. On the following pages are new product developments representative of 1966.

Shot peening of inside and outside diameters of the hub ends of helicopter rotor blades is provided by this Wheelabrator cabinet at the Vertol Division of The Boeing Company in Morton, Pa. The outside is peened by wheel-thrown abrasives and the interior, from two directions, by air lances of abrasives. The process increases the fatigue life of the parts.



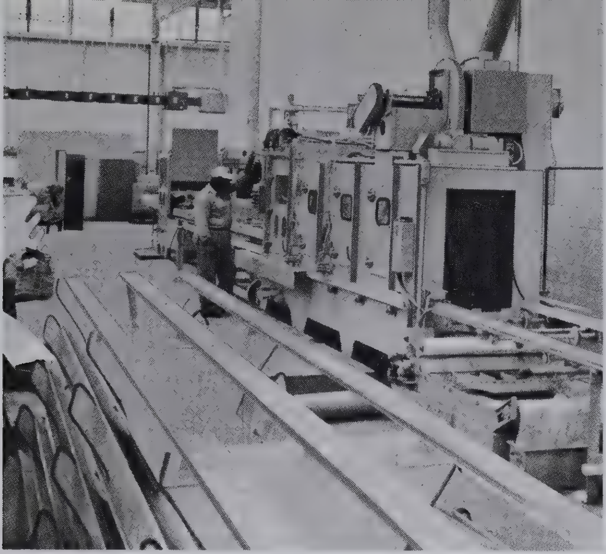
The Wheelabrator Corporation of Canada engineered this completely automated top loading Super Tumblast, left, for the Grinnell Company Ltd., in Toronto. It is the first heavy duty foundry application of this method and reduces the loading time for batches of castings to a matter of seconds.

A Wheelabrator machine, right, has gained outstanding acceptance as a plastics deflasher in Continental Europe. It is marketed by the company's Swiss licensee, George Fischer Limited, and is of much lighter construction than abrasive blast machines for metal working plants.



A Wheelabrator ram roll provides a highly automated, high production abrasive cleaning and peening operation for an automatic transmission plant of a major automotive company. One ram loads the parts into a cage, a second ram moves the cages through the cleaning cabinet, and a third ram removes the cleaned parts from the cages. The "roll" phase occurs when the cages turn to remove spent abrasive from the blast cleaned parts.

Sintobrator Ltd., Wheelabrator's Japanese associate, produced this Lorco Twin Bowl vibratory finishing machine. The machine cuts down costs, labor and time in factories where various die cast parts of bicycles and Honda motorcycles are cleaned or deburred.

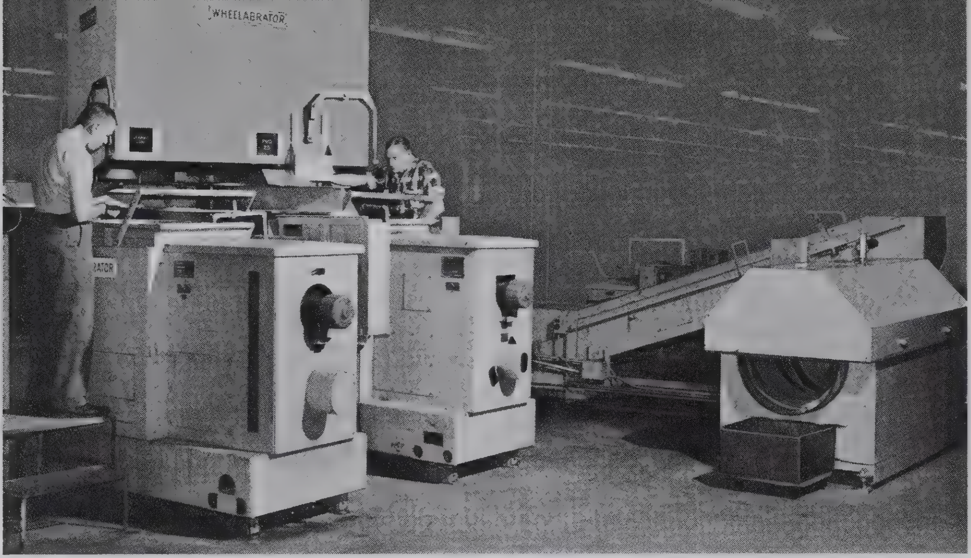


A Wheelabrator Liquamette (wet blast cleaning) prepares surfaces of helicopter rotor blades for bonding at the Bell Aerosystems plant in Buffalo. The blades are automatically cleaned, rinsed twice and dried.

Honeycomb is bonded to aluminum foil of .005 inch thickness at Twin Industries for outer panels of a General Electric satellite. Methods developed by Twin for this precise bonding advanced the latest state of the art.

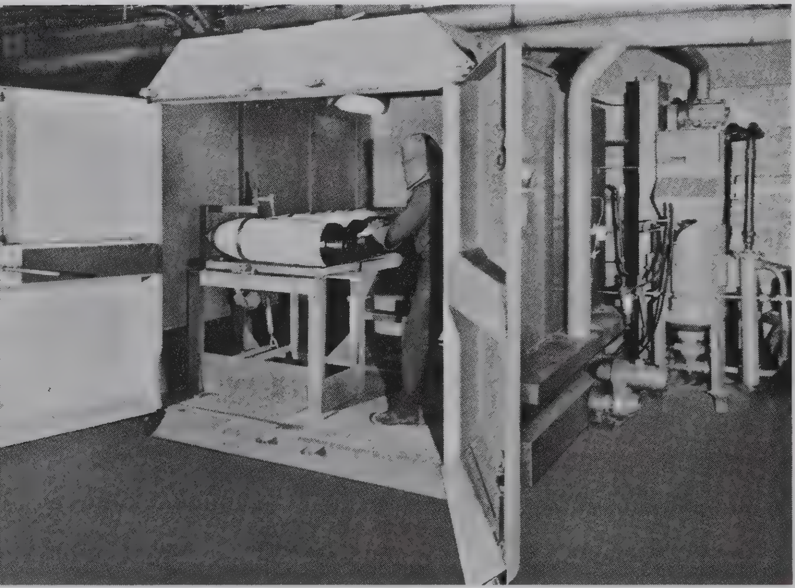
A special type of welding technique for aluminum creates interesting patterns at Twin Industries. The frame is part of two electronic consoles fabricated for Raytheon's Hawk missile.

The entire tail section of the Grumman Gulfstream II is fabricated in Twin's Buffalo Plants. First shipments for this new executive jet aircraft were made in 1966 and are continuing on an increasing schedule.

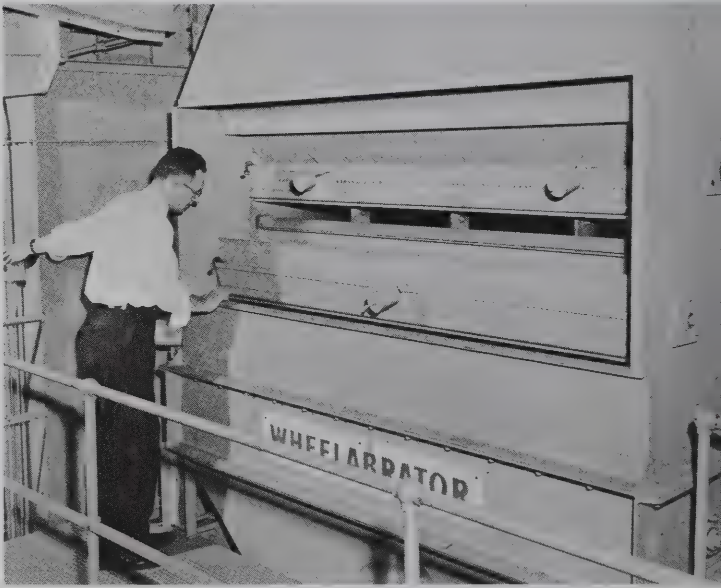


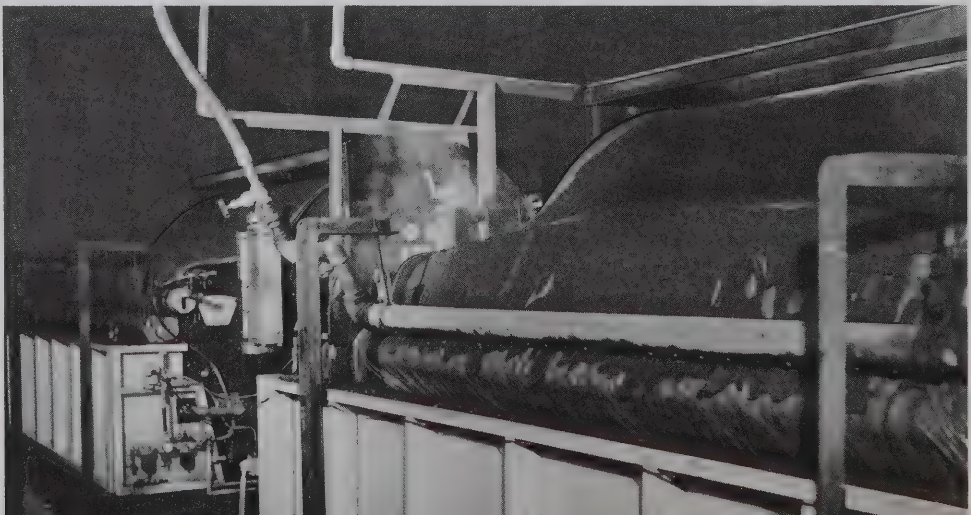
Operating in a Barber-Colman plant in Rockford, Ill., this Lorco fully automated batch type vibratory finishing system is the first of its type. The equipment loads the media, separates parts after cleaning, applies a heated rust inhibitor and dries the parts in a continuous process. It can change to any of four types of cleaning media without interrupting the process.

From Tilghman Wheelabrator in England comes a series of new pitless abrasive blast rooms with many uses. A feature of the new cleaning room is a continuously oscillating grid for the mechanical recovery of abrasives from the working floor, rather than from pits or other underground methods. The steel abrasives are hurled at parts to be cleaned by compressed air nozzles.



As part of its concept of providing total assistance to customers, Wheelabrator introduced this 96-inch separator for blast cleaning machines during the year. It removes extra heavy volumes of sand and worn abrasives and grit from the recirculating abrasive systems, thus maintaining high cleaning efficiency. It is of special use to foundries, but has other applications.





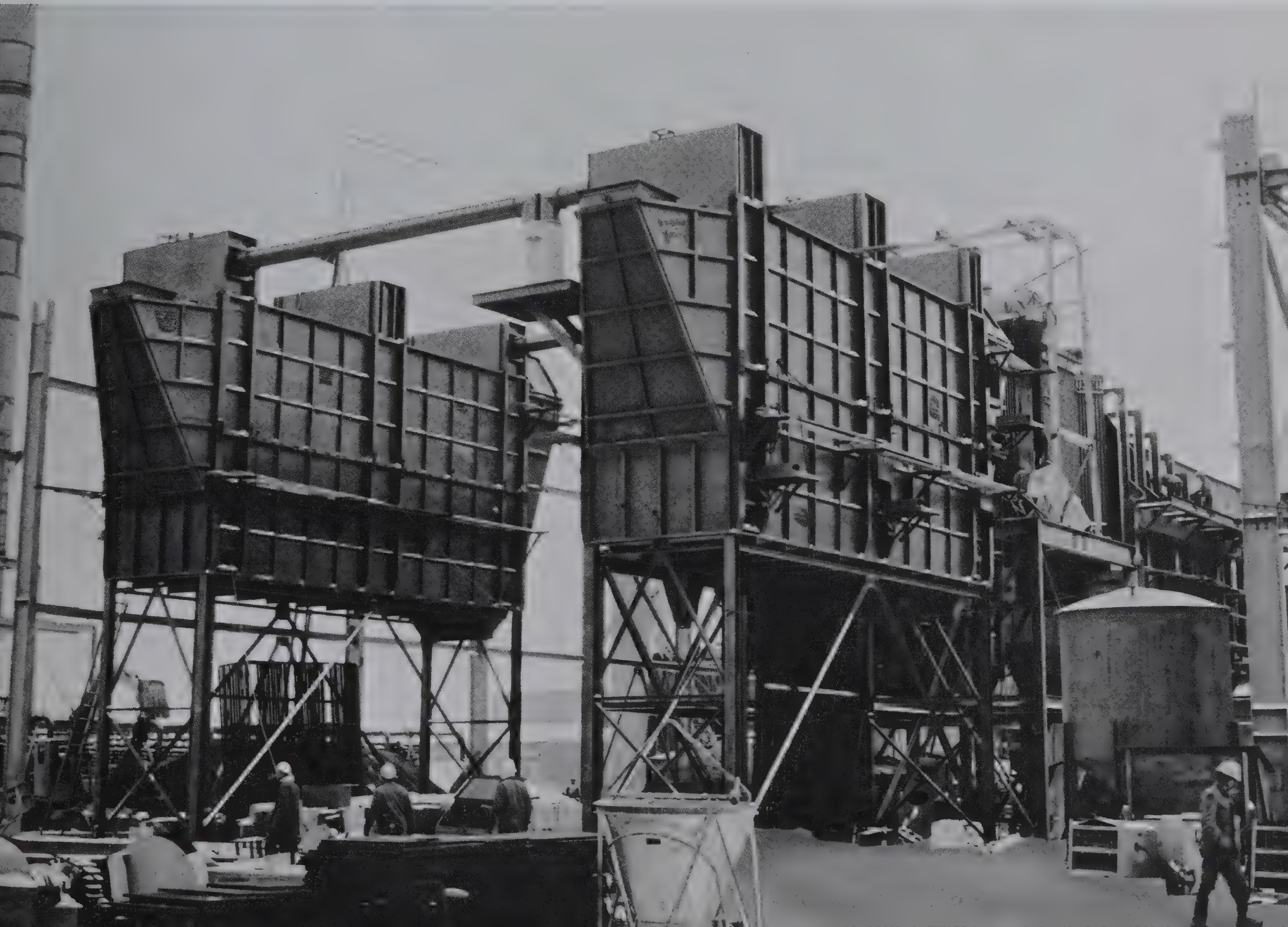
A new type of Terylene blanket specially woven and fabricated by Barrday Ltd. is part of this vacuum filter on an iron precipitate at International Nickel Company's refinery at Port Colborne, Ont. The mud cake seen on the machine has been dehydrated with the aid of the Barrday fabric. The dried material breaks off the blanket and as it is further processed, iron is recovered from the mud.

PROCESSES

New in '66

The incentive for innovation can range from man's inherent urge to build a better mousetrap to the desire for industrial survival. Generally, it matters not the reason but the result. And at Wheelabrator, there is always the atmosphere to encourage the innovator and inspire the inventor . . . and the patience to wait them out. Sometimes it takes awhile—the NAD process was 10 years in development; sometimes it just sort of happens—the Balcrank Pulser Pump was first put together to speed the output of one of the machine tools in a company shop. Research and development have grown steadily in stature since 1933 when a wheel to hurl abrasives came into being—a device which gave the company its name. Processes which were operationally successful in 1966, or reached such promise, are pictured here.

First Wheelabrator-Lurgi electrostatic precipitator installation in the U. S. is at the new Depue, Ill. facility of the New Jersey Zinc Company. These side-by-side precipitators will collect solid particles of calcined zinc ore from hot gas streams from two zinc roasters, one precipitator for each roaster. Temperature of gases will range to 570°F.



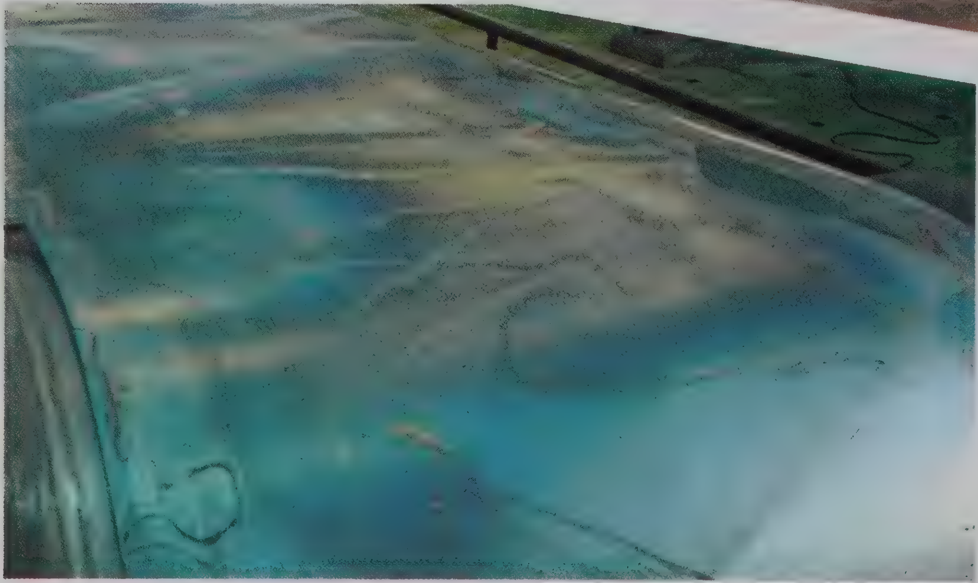
NAD — No-Acid Descaling.

For the first time in the history of the steel industry, low carbon steel is being cold rolled without prior descaling with acid. Wheelabrator's NAD process, using a combination of steel abrasives and steel grit, eliminates the requirement of acid pickling to clean steel and—as a significant fringe benefit—diminishes the water pollution problem.

More than 35 million tons of steel are acid pickled annually in the United States and the process generates 1.5 billion to 2 billion gallons of waste pickle liquor. The disposal of waste pickle liquor can present a threat of water pollution, according to steel industry sources.

The dirty surfaced steel is fed into the No. 1 Wheelabrator cabinet where the metal is blasted free of scale with small steel pellets.

An overall view of the Wheelabrat
foreground blast cleans the steel w
further refines the metal with fine



Iron oxides, or mill scale, cover the s
steel strip and must be removed before
formed or cold reduced.

Introduced in 1966, after 10 years of development, the Wheelabrator NAD process employs two different abrasive blast treatments in a single installation, replacing the sulfuric and the hydrochloric acids conventionally used in descaling steel. Just as importantly, the NAD process produces steel surfaces as clean as, or cleaner than, the acid treatment at a cost less than acid pickling.

These photographs are of the NAD process in operation in the flat rolling mill of Dosco Steel Limited, a subsidiary of Dominion Steel and Coal Corporation in Contrecoeur, Quebec, 40 miles east of Montreal. There are no provisions or requirements for acid pickling or the disposal of waste pickle liquor in Dosco's mill.

ns—the cabinet in the
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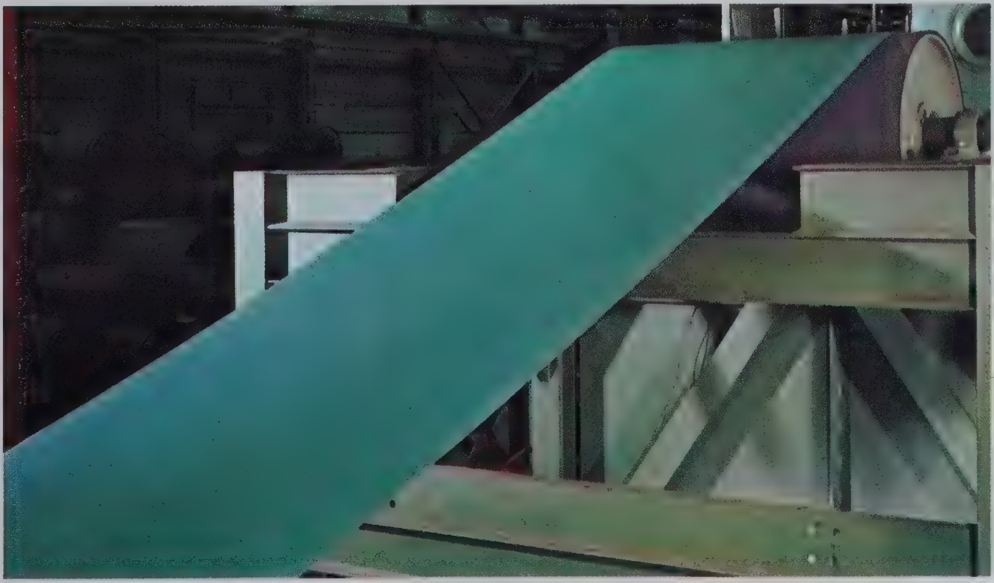
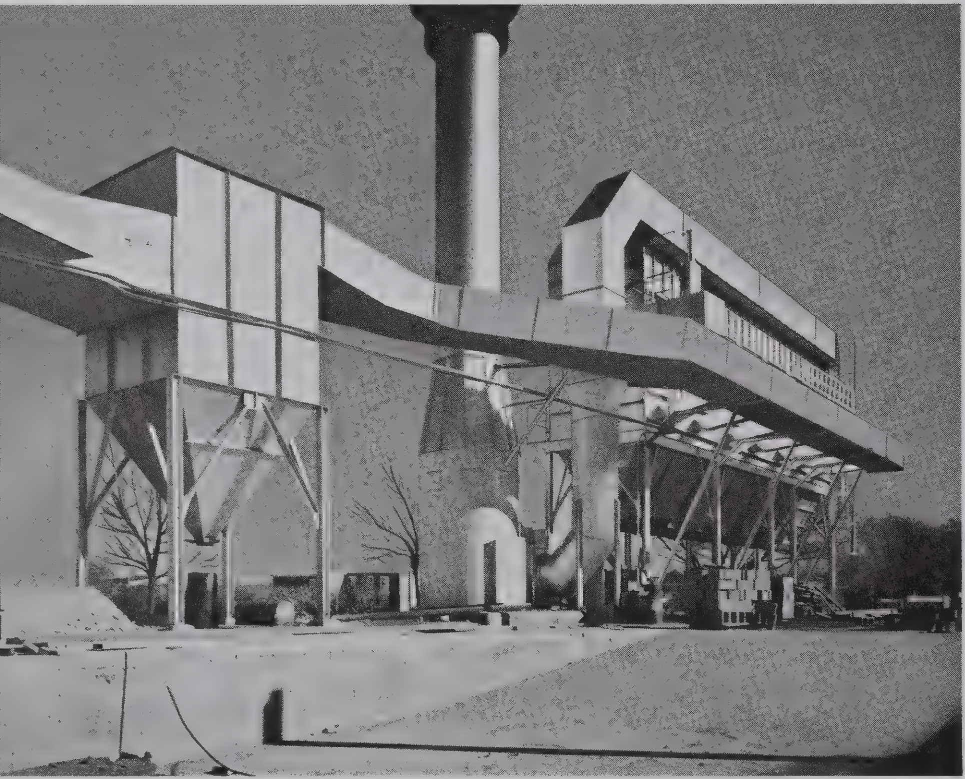
of this hot-rolled
etal can be further

An inspector checks the steel after it has passed through the first cleaning cycle. He is using a Scalometer, developed by Wheelabrator to determine accurately the cleaning results.

This is the payoff—steel emerging from the second phase of the NAD process is 95% to 99% scale free. This steel is ready to be sold as hot rolled blast cleaned strip or can be further processed in either a temper mill or a cold mill.





The company installed its first turbo-filter in 1966 at the Halstead Metals Products Inc. plant in Wynne, Ark. The turbo-filter, a mechanical type control unit, employs cyclonic action to separate heavy particles from gas streams. Halstead uses it in conjunction with a Wheelabrator cloth collector, right.

Delta Sonics, Inc., a 1966 acquisition, produces many types of ultrasonic equipment, including a widely used ultrasonic welder for plastics. This installation is welding plastic containers at Loma Industries, Inc. in Fort Worth, Texas.

An experimental installation to collect fly ash with a fiberglass cloth tube system from a coal burning power station was undertaken by Wheelabrator during 1966. The collector, between the stacks, is at a station of the Public Service Company of Indiana. Second stage of the experiment will attempt to remove sulphur dioxide from the stack.

Sound waves are also employed in the cleaning and testing of metals. Viewed here, through the window of a "clean room," is an operator using a Delta Sonics submersible transducer for the ultrasonic cleaning of Honeywell components for thermostatic controls.

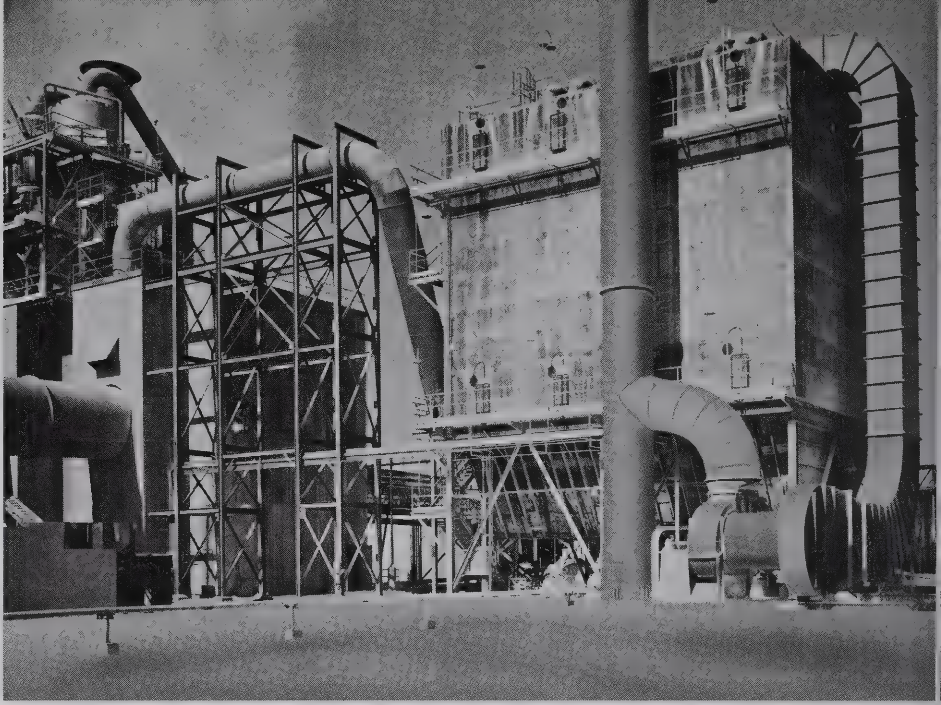
APPLICATIONS

New in '66

At one time, the company's products focused largely on a handful of industries. But the flexibility of its equipment and the ingenuity of its field sales engineers kept unearthing new markets, new uses. Its abrasives could clean rubber and plastics as well as metal, regardless of the size or shape; systems were sold to control dust and fume long before air pollution became a household word; it earned a role in the jet transport age with its ability to bond honeycomb to aluminum: it borrowed shot peening, pioneered for the auto industry, and applied it to increase the life of aircraft parts. A collection of typical advances unveiled in the past year is reflected in succeeding pages. New applications and new techniques, almost as much as new products, have helped keep Wheelabrator competitive.

Man borrowed liberally from the bee to develop the metal honeycomb which now has wide industrial applications, particularly for aviation and space vehicles. Here, an employe at Twin Industries, one of the leading specialists in the bonding of honeycomb, measures a stretched section of the metal to insure the proper sizes of the comb's cells.

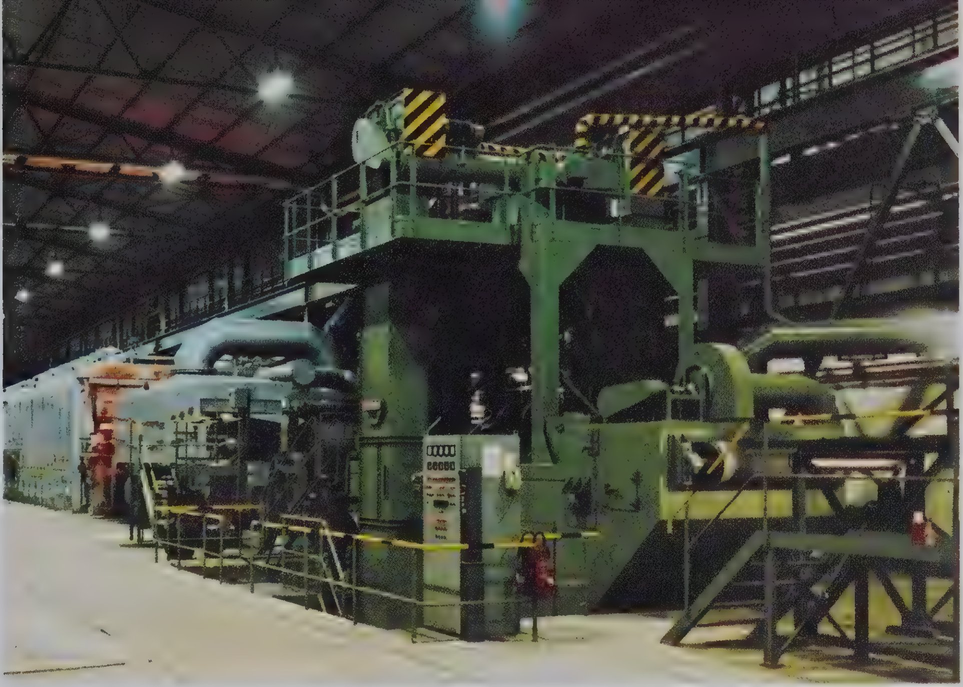
First application of a Wheelabrator cloth tube air pollution control system to collect dust from a lime kiln was made in 1966 at the National Carbide Company Division of Air Reduction Co., Inc., Louisville, Ky. This collects 35 to 50 tons of dust daily, adequately meeting the requirements of the County Air Pollution Board for pollutant removal. Part of lime recovery plant is at left, with Wheelabrator unit, right.



One man controls these three fully automated 34-foot Super Tumblasts in an Ohio foundry of a major automotive company. Parts to be abrasive cleaned are transferred from the conveyor into the loaders which tip the parts up into the Wheelabrator Tumblasts, retaining the empty boxes. When the cleaning cycle is completed, the boxes are reloaded and move back on to the conveyor. Across the aisle, are two similar Tumblasts.

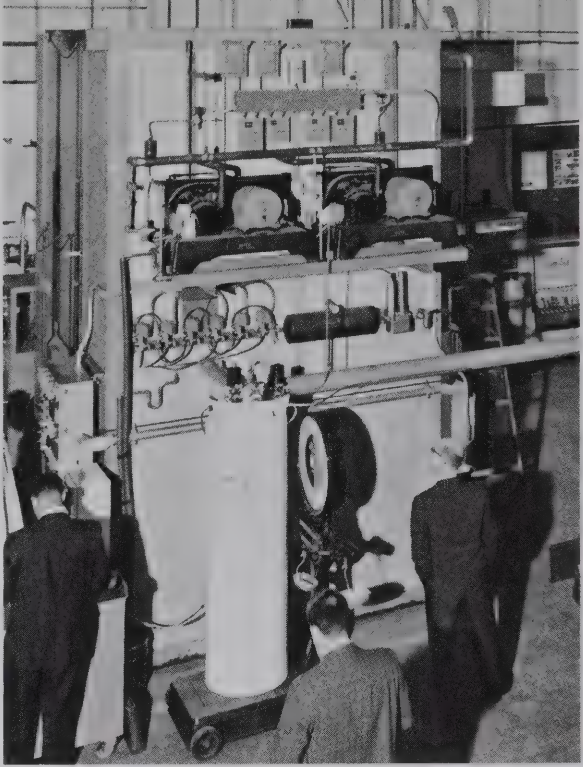
More than 1-1/4 million yards of natural and synthetic fiber were used to produce over 750,000 cloth filter tubes for air pollution control systems by the W. W. Criswell Division in '66. Included in the record production was a tube newly designed for use in carbon black plants. Employes at the Riverton, N. J. plant are preparing tubes for shipment.

A machine for descaling large alloy steel strip by the Wheelabrator blast cleaning process was produced by the company's Swiss partner, Graber & Wening. This equipment, at Stahlwerke Südwestfalen, Geisweid, Werk Dellenburg in Germany, cleans chromium nickel and chromium.

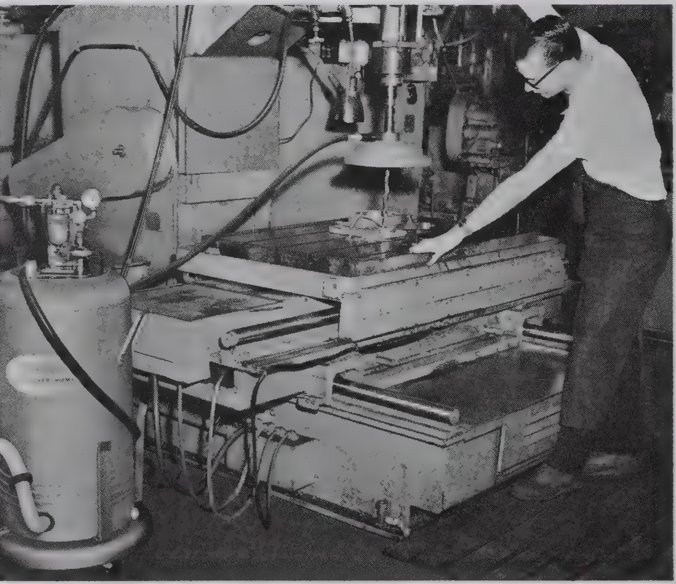


A Wheelabrator swing table is one of the machines in the metal cleaning facility established in 1966 by Indabrator Ltd., Wheelabrator's joint venture in Bombay, India. The cleaning facility also serves to demonstrate the types of Wheelabrator equipment Indabrator manufactures for the Indian market.

At the Hellenic Shipyards Company in Athens, Greece, a Wheelabrator machine descales steel sheet to be used in ship construction. The abrasive blasting equipment was built by Graber & Wening in its Neftenbach, Switzerland, plant.



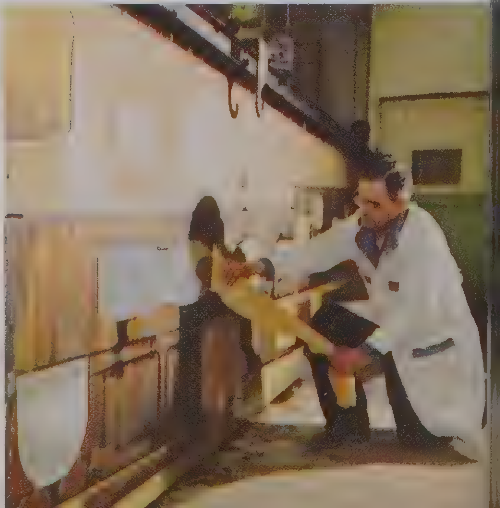
Liquid nitrogen, a third source of refrigeration for Wheelabrator's Frigibrator machines, was tested in 1966. The new method cuts costs in the freezing of organic rubber and silicone polymer parts prior to deflashing. Carbon dioxide, effective with organic materials, and a cryogenic process which freezes both organic and silicone products for deflashing, are also used in Frigibrators.



A portable model of the Balcrank Jet Pulser Pump is pumping coolant through an oil hole drill on a radial drill. The pump provides a pulsating flow of lubricant to the drill which simultaneously expedites drilling, clears out chips and prolongs drill life.

Acquired in 1966 was Abrasive Finishing Company, a Southern California shot peening specialist. Shown on this Wheelabrator 96-inch swing table at Abrasive's Gardena plant, is an aircraft landing gear component which will have its fatigue life span increased by the shot peening technique when it is moved into the abrasive cabinet.

As part of Twin Industries' continuous program for quality, a new method was installed for determining possible surface defects in metals. This system, more sensitive than prior methods, handles larger sizes and lengths and larger volumes.



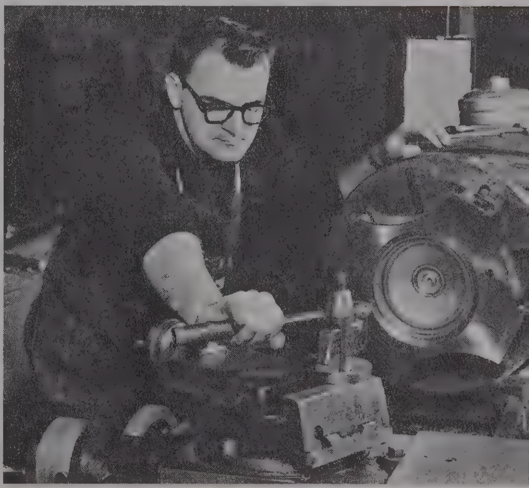
Twin advanced its techniques in chemical milling to handle more exacting tolerances. An aluminum wing skin for the Grumman S-2E aircraft is etched with chemicals rather than milled by machine. The 21-foot section will have 11 different thicknesses.

New in '66

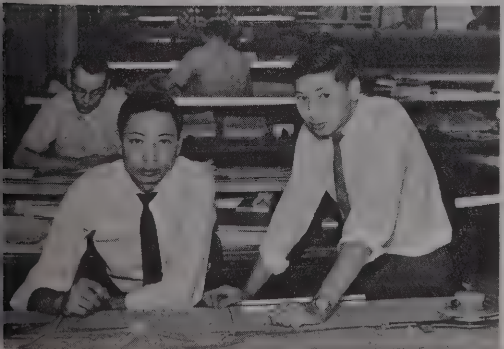
It is not just enough to equip a plant with machines and drawing boards and await the output of production and the generation of new ideas. Basically, it is first necessary to equip the people to man the machines and to develop the designs. In the prevailing critical labor market, Wheelabrator used all the available sources to enlist manpower —and womanpower. It expanded its internal training programs to upgrade those on the payroll and school those fresh from the personnel offices; enlisted the cooperation of local schools and technical institutes for extracurricular courses; turned to government programs, such as the Manpower Development Training Act, and recruited vigorously from campus to campus and coast to coast. On this page is a cross section of new people who joined the company in 1966.

Walter Jones came to Twin in April with no prior machine shop experience. A graduate of a 16-week U. S. Government course, he operates a three-spindle hydrotel.

A young air pollution control sales engineer, Terry Tureskis, right, at the site of a Wheelabrator ultra-filtration installation, with James Farley, plant engineer of an automotive foundry. Terry was hired in March.



Five months of on-the-job training were required before Donald E. Ritter qualified as a Class A engine lathe operator. He reported first to Wheelabrator Division in May.



Engineering trainees—Tommy S. S. Li and brother Hon Sun Li (right)—came with M.E. degrees directly from Tri State College to Wheelabrator.

Kathy Woofter has worked on the second shift at Wheelabrator since last October. She is surrounded here with Balcrank lubrication pumps.

Richard Baugh, left, and Theodore Guzowski, were employed by Twin on the same day in October. They are machine operators.

DOMESTIC OPERATIONS

WHEELABRATOR DIVISION, Mishawaka, Ind.

Airless blast cleaning equipment, air pollution control systems, vibratory precision finishing machines, steel abrasives and abrasive compounds.

James F. Connaughton, President
Kenneth E. Blessing, Vice President—General Manager
Leslie L. Andrus, Vice President
Gilbert D. Dill, Vice President
James E. Donlan, Vice President—Controller
James L. Hesburgh, Vice President—International
D. Roger Neeld, Vice President—Engineering
Robert L. Orth, Vice President—Sales
F. John Pichard, Vice President—Marketing
Paul H. Setzler, Vice President—Operations
Edward T. Sullivan, Treasurer

W. W. CRISWELL CO. DIVISION, Riverton, N. J., and Riverside, Calif.

Fabric products for filtering solids from gas or liquid streams.

Leslie L. Andrus, President
Len B. Nelson, Vice President and General Manager

ABRASIVE FINISHING COMPANY, Gardena, Calif.

Shot peening, abrasive cleaning and finishing facilities.

Leonard J. Kennedy, President

DELTA SONICS, INC,, Hawthorne, Calif.

Ultrasonic cleaning, testing and welding equipment.

Carl J. Goldbaum, President

DOMESTIC SALES OFFICES

Atlanta, Georgia
Birmingham, Alabama
Buffalo, New York
Cincinnati, Ohio
Chicago, Illinois
Cleveland, Ohio
Dallas, Texas
Davenport, Iowa
Detroit, Michigan
Houston, Texas
Louisville, Kentucky
Los Angeles, California
Milwaukee, Wisconsin
Mishawaka, Indiana
New York, New York
Philadelphia, Pennsylvania
Pittsburgh, Pennsylvania
Portland, Oregon
San Francisco, California
Sarasota, Florida
Springfield, Massachusetts
St. Louis, Missouri
Union, New Jersey

TWIN INDUSTRIES CORPORATION DIVISION, Buffalo, N. Y.

Assemblies and sub-assemblies for military and commerical aircraft, ground handling and ground support equipment for aircraft and missiles, Twinfold material and machines.

Robert F. Hurt, President
George R. Hecht, Senior Vice President
Ernest Summers, Senior Vice President and Controller
Edward W. Fisher, Jr., Vice President
George Krnasky, Vice President
Stuart N. Smith, Vice President

BALCRANK DIVISION, Mishawaka, Ind.

Stationary and mobile lubrication equipment, service station supplies, industrial pumps, machine tool accessories.

Elmer A. Rich III, Vice President
Frank A. Johnson, Vice President—Sales, Lubrication Equipment

INTERNATIONAL OPERATIONS

WHEELABRATOR CORPORATION OF CANADA LIMITED, Toronto, Ont., Canada
Airless blast cleaning equipment, air pollution control systems, abrasives.
Leslie L. Andrus, President
Robert A. Campbell, Vice President and General Manager

BARRDAY LTD., Galt, Ont., Canada
Fabric and plastic filtration media.
Charles H. Barrett, President

McDONALD WELDING LIMITED, Oakville, Ont., Canada
Fabrication of sheet metal, plate and structural steel.
Malcolm McDonald, President

EDWARD LIPSETT LTD., Vancouver, Brit. Columbia, Canada
Cloth filters, canvas and plastic products.
Harry Inman, President

TILGHMAN WHEELABRATOR LIMITED, Broadheath, Altrincham, Cheshire, England
Airless blast cleaning equipment, air pollution control systems, air and gas compressors.
R. C. Harrower, Dep. Managing Director

TILGHMAN WHEELABRATOR KENT (PTY.) LTD., Johannesburg, South Africa
Airless blast equipment.
J. F. Attwell, Director

SOCIÉTÉ WHEELABRATOR-ALLEVARD, Allevard (Iseré), France
Steel abrasives, air pollution control equipment, fabric filtration media.
Georges Bietrix, Chairman of the Board and President

GRABER & WENING AG, Neftenbach, Switzerland
Specially engineered airless blast cleaning equipment.
Dr. Bernard K. Greuter, Chairman

ULLRICH and ROSER, G.m.b.H., Stuttgart-Bad Cannstatt, Germany
Airless blast cleaning equipment.
Otto W. Zollikofer, President

WHEELABRATOR de MEXICO, S.A., Estado de Mexico, Mexico
Airless blast cleaning equipment and metal cleaning operations.
John F. Cordell, Vice President and General Manager

WHEELABRATOR ARGENTINA, SAIC, Buenos Aires, Argentina
Airless blast cleaning equipment.
Pedro Herrendorf, Vice President and General Manager

SINTOBRATOR, LTD., Nagoya, Japan
Steel abrasives, vibratory finishing equipment.
Hideichi Kondo, President

INDABRATOR LIMITED, Bombay, India
Standard airless blast cleaning and air pollution control equipment.
J. V. Patel, Chairman and Managing Director

WHEELABRATOR METAL CLEANING CO. OF THE PHILIPPINES, INC., Quezon City
Metal cleaning operations.

WHEELABRATOR YIT THAILAND, LIMITED, Bangkok, Thailand
Metal cleaning operations.

INTERNATIONAL MANUFACTURING ASSOCIATES

George Fischer Limited
Schaffhausen, Switzerland

Sintokogio, Ltd.
Nagoya, Japan

McPherson's Limited
Melbourne, Australia

Equipamentos Industriais
"Eisa" Ltd., Sao Paulo, Brazil

Carl Kurt Walther, G.m.b.H.
Wuppertal-Vohwinkel, Germany

INTERNATIONAL SALES AGENTS

Neisser & Company, S.A., Lima, Peru
Mario R. Franceschini, Inc., Santurce, Puerto Rico
Motores, S.A., Bogota, Colombia
William Hunt & Co. (International) Inc. Taipei, Taiwan
Griffin Machinery Corporation, Manila, Philippines
Tecnagent, Santiago, Chile
Walco, S.C., Caracas, Venezuela
Aravah A.T.L. Limited, Tel Aviv, Israel
Forel de Mexico, S.A., Mexico, D.F., Mexico

THE WHEELABRATOR CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS DECEMBER 31, 1966 AND 1965

ASSETS	1966	1965
CURRENT ASSETS:		
Cash	$ 2,376,210	$ 8,531,909
Notes and accounts receivable, less reserves		
Trade	11,340,240	7,653,010
From sales under contracts	3,826,024	1,805,907
Inventories, at the lower of cost or market		
Raw materials and supplies (first in, first out)	5,106,558	3,515,002
Work in process and finished goods (first in, first out)	5,306,686	5,333,579
Contracts in progress	6,721,239	5,190,708
Less—Progress payments	(289,925)	(917,454)
Prepaid expenses	390,171	382,701
Total current assets	$34,777,203	$31,495,362
OTHER ASSETS:		
Noncurrent receivables	$ 616,577	$ 387,741
Goodwill, at cost less amortization	605,763	184,782
Other	338,815	482,802
	$ 1,561,155	$ 1,055,325
PROPERTY, PLANT AND EQUIPMENT, at cost:		
Land	$ 171,642	$ 100,551
Buildings and improvements	4,277,899	3,155,619
Machinery and equipment	10,854,466	8,969,518
	$15,304,007	$12,225,688
Less—Reserves for depreciation	7,485,567	6,682,412
	$ 7,818,440	$ 5,543,276
Leasehold improvements, net	897,616	1,054,683
	$ 8,716,056	$ 6,597,959
INVESTMENTS IN AFFILIATED COMPANIES, at cost (Note 1)	$ 2,815,220	$ 1,853,569
	$47,869,634	$41,002,215

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

LIABILITIES	1966	1965
CURRENT LIABILITIES:		
Notes payable	$ 489,000	$ 449,510
Accounts payable	3,201,279	3,473,088
Accrued wages, benefits, taxes, etc.	4,318,171	3,737,472
Dividends payable	487,941	483,096
Reserve for Federal and Canadian taxes on income	1,701,362	2,282,040
Total current liabilities	$10,197,753	$10,425,206
LONG TERM DEBT:		
6¼% notes, due June 1, 1968	$ 4,250,000	$ —
Other, average interest 6¼%, payable through 1976	555,505	—
	$ 4,805,505	$ —
MINORITY INTEREST	$ 137,689	$ 68,305
STOCKHOLDERS' EQUITY (Notes 2 and 3):		
$1.50 cumulative convertible preferred stock, par value $35 per share, redeemable at $36.50 per share; authorized 85,715 shares; issued 1966, 27,858 shares; 1965, 37,338 shares	$ 975,030	$ 1,306,830
5% convertible second preferred stock, par value $5 per share, 2,556,320 shares authorized and outstanding	12,781,600	12,781,600
Common stock, par value $1 per share; authorized 3,000,000 shares; issued 1966, 1,275,195 shares; 1965, 1,245,930 shares	1,275,195	1,245,930
Additional capital	7,230,212	6,873,657
Retained earnings	10,503,866	8,337,903
	$32,765,903	$30,545,920
Less—4,300 shares of common treasury stock, at cost	(37,216)	(37,216)
	$32,728,687	$30,508,704
	$47,869,634	$41,002,215

THE WHEELABRATOR CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME FOR THE YEARS ENDED DECEMBER 31, 1966 AND 1965

	1966	1965
Net sales	$70,001,474	$60,241,085
Cost of goods sold	51,557,552	43,910,506
Gross profit on sales	$18,443,922	$16,330,579
Selling expenses	$ 6,890,735	$ 5,712,897
General and administrative expenses	4,796,848	4,725,375
	$11,687,583	$10,438,272
Operating income	$ 6,756,339	$ 5,892,307
Other income or (expense)—		
Royalties and other income, net	$ 416,288	$ 426,846
Interest income	138,006	157,810
Interest expense	(136,280)	(6,698)
	$ 418,014	$ 577,958
Income before taxes	$ 7,174,353	$ 6,470,265
Provision for Federal and Canadian income taxes	3,420,000	3,060,000
Income after taxes	$ 3,754,353	$ 3,410,265
Minority interest	19,153	23,360
Net income for the year	$ 3,735,200	$ 3,386,905

The provision for depreciation and amortization was $1,013,884 in 1966 and $827,871 in 1965.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

CONSOLIDATED STATEMENTS OF ADDITIONAL CAPITAL AND RETAINED EARNINGS FOR THE YEARS ENDED DECEMBER 31, 1966 AND 1965

	1966	1965
ADDITIONAL CAPITAL		
Balance at beginning of year	$ 6,873,657	$ 5,547,168
ADD:		
Excess of par value of $1.50 preferred stock (par value $35) over par value of common stock (par value $1) issued upon conversion; 9,480 shares of preferred converted into 24,881 shares of common in 1966 and 27,680 shares of preferred converted into 72,649 shares of common in 1965	306,630	895,755
Excess of option price over par value of common stock issued under stock option plan; 4,384 shares in 1966 and 89,466 shares in 1965	49,925	430,734
Balance at end of year	$ 7,230,212	$ 6,873,657
RETAINED EARNINGS		
Balance at beginning of year	$ 8,337,903	$ 6,493,906
ADD (DEDUCT):		
Net income for the year	3,735,200	3,386,905
Cash dividends declared—		
$1.50 preferred stock, $1.50 per share	(46,593)	(77,216)
5% second preferred stock, $ .25 per share	(639,080)	(639,080)
Common stock, $ .70 per share	(883,564)	(826,612)
Balance at end of year	$10,503,866	$ 8,337,903

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 1966

(1) Principles of Consolidation

The accounts of all domestic and Canadian subsidiaries of the company are consolidated in the accompanying financial statements. One Canadian and three domestic subsidiaries were acquired during 1966 and their operations have been included in the accompanying statement of income from dates of acquisition.

Ten foreign companies are included as investments, at cost, in the accompanying financial statements. Results of operations attributable thereto are not reflected in these statements; however, dividends and royalties received from these investments are included in income.

	Country	*Stock Ownership*	*Investment at Cost*
Tilghman-Wheelabrator, Ltd.	England	12%	$855,515
Graber & Wening AG	Switzerland	40%	569,753
Wheelabrator-Allevard	France	51%	546,656
Sintobrator, Ltd.	Japan	40%	388,402
Ullrich and Roser G.m.b.H.	Germany	40%	215,801
Other foreign investments			239,093
			$2,815,220

(2) Stock Options

Under the stock option incentive plan adopted in 1964, 100,000 shares of common stock were reserved for options to officers and other key personnel. Options for 4,384 shares at prices which range from $5.71 per share to $15.38 per share were exercised during the year at an aggregate price of $54,310. At December 31, 1966, options for 4,890 shares at prices from $5.71 per share to $15.38 per share were outstanding and were exercisable at that date.

(3) Preferred Stock Requirements

The Composite Certificate of Incorporation provides one vote for each share of preferred and common stock outstanding, and for restriction on the amount of dividends on common stock (other than common stock) if specified amounts of unconsolidated retained earnings, or net current assets are not maintained, or preferred stock dividends are in arrears. Under such provisions $8,003,866 of consolidated retained earnings is not restricted as to dividend payments.

At December 31, 1966, 73,156 shares of common stock were reserved for conversion of the $1.50 perferred stock and 1,065,133 shares of common stock were reserved for conversion of the 5% second preferred stock.

The Composite Certificate of Incorporation provides that in 1967 the company will establish a sinking fund for partial redemption of the 5% convertible second preferred stock. The required 1967 sinking fund provision of $255,630 will redeem 51,126 shares of the 5% convertible second preferred stock unless otherwise directed by the Board of Directors, and the common shares reserved for conversion will be decreased by 21,302 shares. During 1966, the company offered to redeem 51,126 shares of the 5% convertible second preferred stock; however, this offer was declined by the holder of the 5% convertible second preferred stock.

(4) Commitments and Contingencies

The company is committed under long-term leases which expire at various dates through 1981. The aggregate annual payment of rentals under these leases is approximately $561,000 (of which $294,000 is payable to affiliated companies) for each of the next five years. At December 31, 1966, the company was negotiating to acquire substantially all of the land and buildings currently being leased.

Certain sales of the company are subject to renegotiation. In the opinion of management, no significant liability should result from renegotiation.

Mr. Hurt

Mr. Lee

TWIN HAS NEW PRESIDENT

On Feb. 1, 1967, John J. Lee retired as president of the Twin Industries Corporation Division and Robert F. Hurt was elected to succeed him.

Mr. Lee, whose career in aviation started in 1917, is remaining as a consultant to Twin Industries and will continue as a member of the Board of Directors of The Wheelabrator Corporation and as a member of the Board's operating committee. He has been with Twin since 1945.

Mr. Hurt has spent most of his business life in aviation and astronautics, the past 15 years with Lockheed Aircraft Corporation. Most recently, he was president of the Lockheed Propulsion Company, Redlands, California, and a vice president of the parent corporation. His experience includes all phases of aerospace engineering, manufacturing and sales.

AUDITORS' REPORT

ARTHUR ANDERSEN & CO.
SOUTH BEND, INDIANA

To the Stockholders and the Board of Directors of
The Wheelabrator Corporation:

We have examined the consolidated balance sheet of THE WHEELABRATOR CORPORATION (a Delaware corporation and a majority owned subsidiary of Bell Intercontinental Corporation) AND SUBSIDIARIES as of December 31, 1966, and the related statements of income, additional capital and retained earnings for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We have previously examined and reported on the financial statements for the preceding year.

In our opinion, the accompanying financial statements present fairly the financial position of The Wheelabrator Corporation and Subsidiaries as of December 31, 1966, and the results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR ANDERSEN & CO.

South Bend, Indiana,
February 8, 1967.

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